REMARKS

Applicants appreciate the thorough review of the present application as reflected in the Official Action mailed August 26, 2004. Applicants note that the Official Action was incorrectly sent to Patrick J. O'Shea. Applicants are filing herewith a change of correspondence address to assure that any subsequent actions are sent to the proper parties.

Applicants have amended each of the independent claims to clarify that information is obtained from the client through a plurality of **request and response communications** with the client over the TCP connection. Applicants have also amended the dependency of Claim 26 to depend from Claim 12.

Applicants have also renumbered the second occurrence of Claim 29 as Claim 31 and have also amended Claim 31. Applicants are unsure of the specific format for such changes but have simply renumbered the second occurrence of Claim 29 as 31 in light of the Official Action's reference to the second occurrence of Claim 29 as Claim 31.

The Claim Objections

Claim 26 has been objected to as depending from Claim 11. Applicants have amended Claim 26 to depend from Claim 12 as suggested by the Examiner.

The numbering of the claims has been objected to as there are two occurrences of Claim 29. The second occurrence of Claim 29 has been renumbered as Claim 31 as discussed above.

The Section 112 Rejection

Claims 1-11, 28 and 31 stand rejected under 35 U.S.C. § 112 as indefinite. In particular, these claims recited "a plurality of request/response communications." Applicants have amended Claims 1, 28 and 31 to recite "a plurality of request and response communications" to clarify that the information from the client is obtained by a request and a response to the request. Applicants submit that the claims are not indefinite in light of the clarifying amendment.

Claims 1-9, 11, 28 and 31 Are Not Anticipated by Pai

Claims 1-9, 11, 28 and 31 stand rejected under 35 U.S.C. § 102(b) as anticipated by Pai *et al.* "Locality-Aware Request Distribution in Cluster-based Network Servers" (hereinafter "Pai"). Official Action, p. 3. In particular, the Official Action cites to Section 1, second paragraph, Section 5, second paragraph and Fig. 15 of Pai as disclosing the recitations of Claim 1 regarding evaluating information obtained over the TCP connection. Official Action, p. 4. Section 1, second paragraph of Pai identifies advantages of content based routing. Section 5 of Pai describes forwarding connection requests received at a front-end to a back-end based on an inspection of the content of the connection request. Pai, Section 5, paragraph 2.

In contrast to the system of Pai, Claim 1 of the present application recites "obtaining information from the client over the TCP connection through a plurality of **request and response communications** with the client over the TCP connectionm," where the TCP connection is to the first data processing system. Corresponding recitations are found in Claims 28 and 31. The cited portions of Pai do not describe obtaining information based on a plurality of request and response communications but appear to describe inspecting a connection request to determine where to assign the connection associated with the request. See Pai, Section 5, paragraph 2. Section 1, paragraph 2 of Pai provides no further information as to how content based routing would be provided. Accordingly, Applicants submit that Claims 1, 28 and 31 are not anticipated by Pai as each of the recitations of the claims are not found in the reference. Applicants submit that the dependent claims are patentable at least as depending from a patentable base claim.

Claims 12-14, 16, 26, 27, 29 and 30 Are Not Anticipated by Alteon

Claims 12-14, 16, 26, 27, 29 and 30 stand rejected under 35 U.S.C. § 102(b) as anticipated by the Alteon Brochure entitled "Enhancing Web User Experience with Global Server Load Balancing" (hereinafter "Alteon Brochure"). However, based on the citations in the Official Action, it appears that the citations in the rejection refer to the Alteon White Paper entitled "The Next Step in Server Load Balancing" (hereinafter

"Alteon White Paper"). Applicants, therefore, will respond to the Official Action as if the rejection is based on the Alteon White Paper rather than the Alteon Brochure. If such assumption is incorrect, Applicants request clarification as to the citations of the rejection.

With regard to the specific interpretation of the term "routing communication protocol stack," Applicants note that a routing communication protocol stack is a specific type of communication protocol stack. Applicants also do not acquiesce in the assertion that any device capable of communicating on a network inherently includes a routing communication protocol stack. However, Applicants submit that, even as interpreted by the Examiner, Claims 12-14, 16, 26, 27, 29 and 30 are patentable over the cited references for the reasons discussed below.

Turning to the specifics of the rejection, Alteon White Paper pages 9-11 is cited as disclosing obtaining information from the client over the connection to the routing application and selecting a target application for transfer of the connection based on the obtained information. Applicants are unsure which portions of pages 9-11 are specifically relied on in the Official Action. However, it does not appear that the cited portions of Alteon White Paper describe each of the recitations in amended Claims 12, 29 and 30. Furthermore, the Alteon White Paper does not appear to describe transfer of an active TCP connection but appears to describe routing connection requests such that the connection is then established with a selected server. Alteon White Paper, p. 5, "TCP/IP Server Load-Balancing Operation". This routing appears to be based on packet inspection rather than establishing a connection to the Web Switch and then transferring the established connection as recited in Claims 12, 29 and 30.

With regard to the specific portions of the Alteon White Paper cited in the Official Action, the discussion under the heading "Persistence Policies" on page 9 of the Alteon White Paper describes servers maintaining stateful information so that incoming requests for a particular user are routed to the same server. There is no discussion in this section of the Alteon White Paper of selecting a server based on information obtained from a plurality of request and response communications with the client as recited in Claims 12, 29 and 30.

Likewise, the "Hash" section on page 10 of the Alteon White Paper states that a server is chosen based on the source IP address. The "Minimum Misses" section on page 10 of the Alteon White Paper states that a server is chosen based on the source IP address and a lookup in a server selection table.

The "SSL Session Tracking" section on page 10 of the Alteon White Paper states that a server is chosen based on the SSL Session ID persistence. The Alteon White Paper does state on page 11 that the "Alteon Web Switches examine TCP SYN handshake and subsequent packets to examine the SSL session ID and determine if it belongs to an existing SSL session or a new one." The Alteon White Paper further states on page 11 that "[i]f the session is new, the Web Switch assigns it to a real server based on the configured load balancing algorithm (least connections or round robin)" and "[i]f the packets are associated with an existing session, the connection is assigned to the same server that was involved in previous portions of the SSL session." Thus, these portions appear to involve inspection of the handshakes to set up an SSL session and inspection of packets to determine an SSL session ID. There is no discussion that a connection is made to an application and information obtained by the application through request and response communications. Thus, Applicants submit that the inspections discussed in the Alteon White Paper on page 11 do not anticipate "obtaining information from the client through a plurality of request and response communications with the client over the connection to the routing application" and "selecting a target application for transfer of the connection based on the obtained information" as recited in Claims 12, 29 and 30. Furthermore, the servers are selected based on SSL session ID, not information obtained from the client.

The "Cookie-based Session Tracking" section on page 11 of the Alteon White Paper states that a server is chosen based on HTTP cookie information. In this case, requests are forward to a server based on availability and subsequent requests are forwarded based on a modified cookie. The "Maximum Connections Option" section on page 11 of the Alteon White Paper states that a server is chosen based on a maximum number of connections allowed for a server. The "URL Based Load Balancing" section

on page 11 of the Alteon White Paper states that a server is chosen based on a URL associated with the server.

The Official Action also cites to these same portions of the Alteon White Paper as disclosing "sending a connection transfer message to a target communication protocol stack associated with the selected target application, the connection transfer message containing connection state information associated with the connection to the routing application" and "notifying the target application of the transfer of the connection to the target application." Official Action, p. 9. Applicants can find no reference in the cited portions of the Alteon White Paper to providing connection state information associated with a connection to a routing application or notifying a target application, as opposed to a target server, of the transfer of a connection.

The Official Action does not cite to any portion of the Alteon White Paper or even mention "setting a state of a connection to the target application to the state specified by the connection state information associated with the connection to provide a transferred connection to the target application" as is further recited in Claims 12, 29 and 30.

In light of the above discussion, Applicants submit that the cited portions of the Alteon White Paper do not disclose each of the recitations of Claims 12, 29 and 30 and, therefore, Applicants submit that these claims are not anticipated by the Alteon White Paper. Applicants also submit that the dependent claims are patentable at least as depending from a patentable base claim.

Applicants also submit that certain of the dependent claims are separately patentable over the Alteon White Paper. For example, Claim 13 recites that "target communication protocol stack further carries out providing the application state information to the target application" and "the target application further carries out resuming communications with the client from the application state specified by the provided application state information utilizing the transferred connection." It does not appear that the cited pages 9-11 of the Alteon White Paper describe providing state information of resuming communications with provided application state information as

recited in Claim 13. Accordingly, Applicants submit that Claim 13 is separately patentable for at least these additional reasons.

Claim 14 recites that the target application sends "a response message to the routing application, the response message indicating whether the target application accepts the transfer of the connection." The Official Action cites to page 7 of the Alteon White Paper as disclosing these recitations. Official Action, p. 10. However, the cited portion of the Alteon White Paper describes sending connection requests from the Web Switch to servers to see if the server is still available. Alteon White Paper, p. 7. This does not describe sending a response when a connection is transferred that indicates whether the transferred connection was accepted. Accordingly, Applicants submit that Claim 14 is separately patentable for at least these additional reasons.

Claim 16 recites "selecting a second target application if the response message does not accept the transfer of the connection" and "notifying the routing communication protocol stack of the selection of the second target application so as to initiate transfer of the connection to the second selected target application." The cited portions of the Alteon White Paper at pages 6-7 do not describe selecting a second target if a first target sends a response message that indicates that a transfer of a connection is not accepted. See Official Action, pp. 10-11. Applicants, therefore, submit that Claim 16 is separately patentable over the cited portions of the Alteon White Paper for at least these additional reasons.

Claim 10 is Patentable Over the Cited References

Claim 10 stands rejected under 35 U.S.C. § 103 as obvious in view of Pai and Aron et al. "Efficient Support for P-HTTP in Cluster-Based Web Servers" (hereinafter "Aron"). Applicants submit that Claim 10 is patentable at least as depending from a patentable base claim.

Claim 17 is Patentable Over the Cited References

Claim 17 stands rejected under 35 U.S.C. § 103 as obvious in view of Alteon and United States Patent No. 5,754,752 to Sheh *et al.* (hereinafter "Sheh"). Applicants submit that Claim 17 is patentable at least as depending from a patentable base claim.

Claims 15 and 18-24 are Patentable Over the Cited References

Claims 15 and 18-24 stand rejected under 35 U.S.C. § 103 as obvious in view of Alteon, United States Patent No. 6,758,066 to Logan *et al.* (hereinafter "Logan") and United States Patent No. 5,867,636 to Walker (hereinafter "Walker"). Official Action, p. 13. Applicants submit that Claim 15 and 18-24 are patentable at least as depending from a patentable base claim.

Claim 15 recites that "the routing application further carries out closing a socket associated with the connection if the response message from the target application indicates that the target application accepts the transfer of the connection." As discussed above, pages 9-11 of the Alteon White Paper do not describe establishing a connection and then transferring the active connection. As such, Applicants submit that the cited portions of the Alteon White Paper do not disclose or suggest the recitations of Claim 15 and no connection is established to a routing application. Accordingly, Applicants submit that Claim 15 is separately patentable over the cited portions of the Alteon White Paper for at least these additional reasons.

Claims 18 through 24 recite particular uses of sockets that are not disclosed or suggested by pages 9-11 of the Alteon White Paper. For example, Claims 18 and 19 recite the use of a control socket for bi-directional communications. The Official Action fails to explain how the cited portions of the Alteon White Paper disclose or suggest the specific use of a control socket between a routing application and a protocol stack or between a target application and a protocol stack of the target processor. See Official Action, pp. 13-15. Similar arguments regarding the specific uses of the sockets described in Claims 20 through 22 also apply. Accordingly, Applicants submit that Claims 18 through 22 are separately patentable over the cited references for at least these additional reasons.

Claim 25 is Patentable Over the Cited References

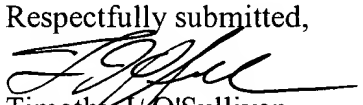
Claim 25 stands rejected under 35 U.S.C. § 103 as obvious in view of Alteon, United States Patent No. 6,031,978 to Cotner *et al.* (hereinafter "Cotner"). Applicants submit that Claim 25 is patentable at least as depending from a patentable base claim.

Conclusion

In light of the above discussion, Applicants submit that the present application is in condition for allowance, which action is respectfully requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (919) 854-1400.

It is not believed that an extension of time and/or additional fee(s)-including fees for net addition of claims-are required, beyond those that may otherwise be provided for in documents accompanying this paper. In the event, however, that an extension of time is necessary to allow consideration of this paper, such an extension is hereby petitioned for under 37 C.F.R. §1.136(a). Any additional fees believed to be due in connection with this paper may be charged to Deposit Account No. 09-0461.

Respectfully submitted,



Timothy J. O'Sullivan
Registration No. 35,632

Myers Bigel Sibley & Sajovec
Post Office Box 37428
Raleigh, North Carolina 27627
Telephone: 919/854-1400
Facsimile: 919/854-1401

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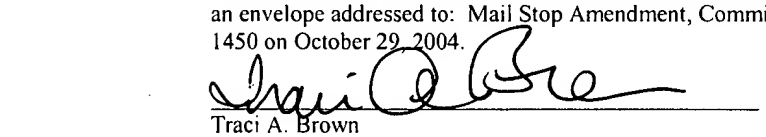

Traci A. Brown